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NEWS 6	MAY 11	KOREAPAT updates resume
NEWS 7	MAY 19	Derwent World Patents Index to be reloaded and enhanced
NEWS 8	MAY 30	IPC 8 Rolled-up Core codes added to CA/CAplus and USPATFULL/USPAT2
NEWS 9	MAY 30	The F-Term thesaurus is now available in CA/CAplus
NEWS 10	JUN 02	The first reclassification of IPC codes now complete in INPADOC
NEWS 11	JUN 26	TULSA/TULSA2 reloaded and enhanced with new search and and display fields
NEWS 12	JUN 28	Price changes in full-text patent databases EPFULL and PCTFULL
NEWS 13	JUl 11	CHEMSAFE reloaded and enhanced
NEWS 14	JUl 14	FSTA enhanced with Japanese patents
NEWS 15	JUl 19	Coverage of Research Disclosure reinstated in DWPI

NEWS EXPRESS	JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
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=> glycophorin and (congestive heart failure) and antibody
L1 1 FILE CAPLUS
L2 0 FILE BIOTECHNO
L3 0 FILE COMPENDEX
L4 0 FILE ANABSTR
L5 0 FILE CERAB
L6 0 FILE METADEX
L7 83 FILE USPATFULL

TOTAL FOR ALL FILES
L8 84 GLYCOPHORIN AND (CONGESTIVE HEART FAILURE) AND ANTIBODY

=> d l1 ibib abs total

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:409131 CAPLUS
DOCUMENT NUMBER: 142:445553
TITLE: Methods for quantification of circulating glycophorin in body fluids for diagnosis of congestive heart failure
INVENTOR(S): Jackowski, George; Van Lieshout, Tracy; Thatcher, Brad; Zhang, Rulin; Yantha, Jason; Rasamoelisolo, Michele
PATENT ASSIGNEE(S): Can.
SOURCE: U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005100964	A1	20050512	US 2003-706599	20031111
AU 2004287908	A1	20050519	AU 2004-287908	20041110
WO 2005045436	A1	20050519	WO 2004-CA1945	20041110

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,

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            TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
            SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
            NE, SN, TD, TG
PRIORITY APPLN. INFO.:                      US 2003-706599      A  20031111
                                            WO 2004-CA1945      W  20041110
AB    The invention provides methods for quantification of circulating
      glycophorin in body fluids for diagnosis of congestive
      heart failure including ELISA and SELDI-TOF.  The
      circulating glycophorin measured by this assay is a truncated
      glycophorin diagnostic for congestive heart
      failure (CHF).


=> glycophorin and  (heart failure) and antibody
L9            1 FILE CAPLUS
L10           0 FILE BIOTECHNO
L11           0 FILE COMPENDEX
L12           0 FILE ANABSTR
L13           0 FILE CERAB
L14           0 FILE METADEX
L15         100 FILE USPATFULL

TOTAL FOR ALL FILES
L16         101 GLYCOPHORIN AND (HEART FAILURE) AND ANTIBODY

=> glycophorin and  ( congestive heart failure)
L17           1 FILE CAPLUS
L18           0 FILE BIOTECHNO
L19           0 FILE COMPENDEX
L20           0 FILE ANABSTR
L21           0 FILE CERAB
L22           0 FILE METADEX
L23          83 FILE USPATFULL

TOTAL FOR ALL FILES
L24          84 GLYCOPHORIN AND (CONGESTIVE HEART FAILURE)

=> file .meeting
'EVENTLINE' IS NOT A VALID FILE NAME
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
that are available.  If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.
ENTER A FILE NAME OR (IGNORE):ignore
'MEDICONF' IS NOT A VALID FILE NAME
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that are available.  If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.
ENTER A FILE NAME OR (IGNORE):ignore
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                                                     ENTRY    SESSION
FULL ESTIMATED COST                                  36.23      36.44

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                                                     ENTRY    SESSION
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=> glycophorin and (congestive heart failure)
L25 0 FILE AGRICOLA
L26 0 FILE BIOTECHNO
L27 0 FILE CONFSCI
L28 0 FILE HEALSAFE
L29 0 FILE IMSDRUGCONF
L30 0 FILE LIFESCI
L31 0 FILE PASCAL

TOTAL FOR ALL FILES
L32 0 GLYCOPHORIN AND (CONGESTIVE HEART FAILURE)

=> glycophorin and antibody
L33 4 FILE AGRICOLA
L34 334 FILE BIOTECHNO
L35 3 FILE CONFSCI
L36 2 FILE HEALSAFE
L37 0 FILE IMSDRUGCONF
L38 139 FILE LIFESCI
L39 183 FILE PASCAL

TOTAL FOR ALL FILES
L40 665 GLYCOPHORIN AND ANTIBODY

=> glycophorin(5A)antibody
L41 1 FILE AGRICOLA
L42 96 FILE BIOTECHNO
L43 1 FILE CONFSCI
L44 0 FILE HEALSAFE
L45 0 FILE IMSDRUGCONF
L46 49 FILE LIFESCI
L47 69 FILE PASCAL

TOTAL FOR ALL FILES
L48 216 GLYCOPHORIN(5A) ANTIBODY

=> glycophorin and monoclonal antibody
L49 3 FILE AGRICOLA
L50 199 FILE BIOTECHNO
L51 2 FILE CONFSCI
L52 0 FILE HEALSAFE
L53 0 FILE IMSDRUGCONF

```
L54          78 FILE LIFESCI
L55         110 FILE PASCAL

TOTAL FOR ALL FILES
L56         392 GLYCOPHORIN AND MONOCLONAL ANTIBODY

=> glycophorin(5A)monoclonal antibody
L57           0 FILE AGRICOLA
L58          43 FILE BIOTECHNO
L59           0 FILE CONFSCI
L60           0 FILE HEALSAFE
L61           0 FILE IMSDRUGCONF
L62          22 FILE LIFESCI
L63          35 FILE PASCAL

TOTAL FOR ALL FILES
L64         100 GLYCOPHORIN(5A) MONOCLONAL ANTIBODY

=> dup rem
ENTER L# LIST OR (END):l58
PROCESSING COMPLETED FOR L58
L65           43 DUP REM L58 (0 DUPLICATES REMOVED)

=> l65 and failure
L66           0 S L65
L67           0 FILE AGRICOLA
L68          43 S L65
L69           0 FILE BIOTECHNO
L70           0 S L65
L71           0 FILE CONFSCI
L72           0 S L65
L73           0 FILE HEALSAFE
L74           0 S L65
L75           0 FILE IMSDRUGCONF
L76           0 S L65
L77           0 FILE LIFESCI
L78           0 S L65
L79           0 FILE PASCAL

TOTAL FOR ALL FILES
L80           0 L65 AND FAILURE

=> l65 and heart
L81           0 S L65
L82           0 FILE AGRICOLA
L83          43 S L65
L84           0 FILE BIOTECHNO
L85           0 S L65
L86           0 FILE CONFSCI
L87           0 S L65
L88           0 FILE HEALSAFE
L89           0 S L65
L90           0 FILE IMSDRUGCONF
L91           0 S L65
L92           0 FILE LIFESCI
L93           0 S L65
L94           0 FILE PASCAL

TOTAL FOR ALL FILES
L95           0 L65 AND HEART

=> l64 and (cardiovascular or heart or myocardio)
L96           0 FILE AGRICOLA
L97           0 FILE BIOTECHNO
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L98           0 FILE CONFSCI
L99           0 FILE HEALSAFE
L100          0 FILE IMSDRUGCONF
L101          0 FILE LIFESCI
L102          0 FILE PASCAL

TOTAL FOR ALL FILES
L103          0 L64 AND (CARDIOVASCULAR OR HEART OR MYOCARDIO)

=> l58 and (glycophorin A or glycophorin B)
L104          0 FILE AGRICOLA
L105         34 FILE BIOTECHNO
L106          0 FILE CONFSCI
L107          0 FILE HEALSAFE
L108          0 FILE IMSDRUGCONF
L109         20 FILE LIFESCI
L110          9 FILE PASCAL

TOTAL FOR ALL FILES
L111         63 L58 AND (GLYCOPHORIN A OR GLYCOPHORIN B)

=> dup rem
ENTER L# LIST OR (END):l105
PROCESSING COMPLETED FOR L105
L112          34 DUP REM L105 (0 DUPLICATES REMOVED)

=> d l112 ibib abs total

L112  ANSWER 1 OF 34  BIOTECHNO  COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER:        2002:34151642   BIOTECHNO
TITLE:                   Section 3: Epitope determination of monoclonal
                         antibodies to glycophorin A
                         and glycophorin B. Coordinator's
                         report. Antibodies to antigens located on glycophorins
                         and band 3
AUTHOR:                  Reid M.E.; Lisowska E.; Blanchard D.
CORPORATE SOURCE:        M.E. Reid, Immunochemistry Laboratory, New York Blood
                         Center, 310 East 67th Street, New York, NY 10021,
                         United States.
                         E-mail: marion_reid@nybc.org
SOURCE:                  Transfusion Clinique et Biologique, (2002), 9/1
                         (63-72), 13 reference(s)
                         CODEN: TCBIFL  ISSN: 1246-7820
DOCUMENT TYPE:           Journal; Conference Article
COUNTRY:                 France
LANGUAGE:                English
AN    2002:34151642   BIOTECHNO

L112  ANSWER 2 OF 34  BIOTECHNO  COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER:        2000:30122377   BIOTECHNO
TITLE:                   Characterization of two novel sublines established
                         from a human megakaryoblastic leukemia cell line
                         transfected with p210(BCR-ABL)
AUTHOR:                  Berman E.; Jhanwar S.; McBride M.; Strife A.;
                         Wisniewski D.; Lambek C.; Clarkson B.
CORPORATE SOURCE:        E. Berman, Leukemia Service, Memorial Sloan Kettering,
                         Cancer Center, 1275 York Avenue, New York, NY 10021,
                         United States.
SOURCE:                  Leukemia Research, (2000), 24/4 (289-297), 24
                         reference(s)
                         CODEN: LEREDD  ISSN: 0145-2126
PUBLISHER ITEM IDENT.:   S0145212699001794
DOCUMENT TYPE:           Journal; Article
COUNTRY:                 United Kingdom
```

LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2000:30122377 BIOTECHNO
AB Disease progression in chronic myelogenous leukemia (CML) is usually accompanied by chromosomal abnormalities such as an additional Ph chromosome, trisomies of chromosome 8 or 19, or i(17) in addition to the standard translocation t(9;22) (q34;q11). However, detailed studies of the various steps involved during this evolution are difficult to perform, thereby making the study of cell lines that contain the transposed genes BCR-ABL, especially those of human origin, an important focus. In this analysis we investigated the human megakaryoblastic cell line MO7e and its subline transfected with BCR-ABL, MO7e/p210. Initial studies demonstrated that the phenotype of the MO7e line was consistent with a megakaryocytic lineage as originally described and was growth factor dependent in liquid culture. The MO7e/p210 subline, however, was growth factor independent and could be further separated into two distinct sublines based on expression of glycophorin A using the monoclonal antibody R10. The subline R10 negative (R10-) was similar to the parent line MO7e but R10 positive (R10+) cells had a distinct erythroid phenotype. In addition, the R10- and R10+ sublines demonstrated strikingly different colony morphology when cultured in semisolid medium. Furthermore, R10+ cells had additional chromosomal abnormalities not detected in the R10- population. These results demonstrate that the insertion of the BCR-ABL in this human leukemia cell line resulted in two distinct subpopulations of cells, each now growth factor independent, but one with a phenotype and karyotype identical to the parent cell line and the other with a different phenotype and additional chromosomal abnormalities. These two subpopulations derived from the MO7e/p210 transfected cell line may prove useful in further understanding the multistep events that occur in the progression of this disease. Copyright (C) 2000 Elsevier Science Ltd.

L112 ANSWER 3 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1999:29455309 BIOTECHNO
TITLE: Analysis of receptor for Vibrio cholerae El Tor hemolysin with a monoclonal antibody that recognizes glycophorin B of human erythrocyte membrane
AUTHOR: Zhang D.; Takahashi J.; Seno T.; Tani Y.; Honda T.
CORPORATE SOURCE: T. Honda, Department of Bacterial Infections, Res. Inst. for Microbial Diseases, Osaka University, 3-1 Yamadaoka, Suita, Osaka 565-0871, Japan. E-mail: honda@biken.osaka-u.ac.jp
SOURCE: Infection and Immunity, (1999), 67/10 (5332-5337), 28 reference(s) CODEN: INFIBR ISSN: 0019-9567
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1999:29455309 BIOTECHNO
AB El Tor hemolysin (ETH), a pore-forming toxin secreted by Vibrio cholerae O1 biotype El Tor and most Vibrio cholerae non-O1 isolates, is able to lyse erythrocytes and other mammalian cells. To study the receptor for this toxin or the related molecule(s) on erythrocyte, we first isolated a monoclonal antibody, B1, against human erythrocyte membrane, which not only blocks the binding of ETH to human erythrocyte but also inhibits the hemolytic activity of ETH. Biochemical characterization and immunoblotting revealed that this antibody recognized an epitope on the extracellular domain of glycophorin B, a sialoglycoprotein of erythrocyte membrane. Erythrocytes lacking glycophorin B but not glycophorin A were less sensitive to the toxin than were normal human erythrocytes. These results indicate that glycophorin B is a

receptor for ETH or at least an associated molecule of the receptor for ETH on human erythrocytes.

L112 ANSWER 4 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1998:28153034 BIOTECHNO
TITLE: Prenatal diagnosis of the fetal Rhc genotype from peripheral maternal blood
AUTHOR: Geifman-Holtzman O.; Kaufman L.; Gonchoroff N.; Bernstein I.; Holtzman E.J.
CORPORATE SOURCE: Dr. O. Geifman-Holtzman, Reproductive/Perinatal Genetics Div., Dept. of Obstetrics and Gynecology, SUNY Health Science Center, 750 East Adams Street, Syracuse, NY 13210, United States.
SOURCE: Obstetrics and Gynecology, (1998), 91/4 (506-510), 14 reference(s)
CODEN: OBGNAS ISSN: 0029-7844
PUBLISHER ITEM IDENT.: S0029784497007151
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1998:28153034 BIOTECHNO
AB Objective: To determine the fetal Rhc genotype by using the polymerase chain reaction (PCR) amplification procedure and maternal blood at the different steps of the fetal cell enrichment process. Methods: Maternal peripheral venous blood samples were obtained from 11 pregnant women homozygous for the C antigen before amniocentesis. Three were not alloimmunized and eight were alloimmunized. The fathers were known to be heterozygous or homozygous for the c antigen by serologic testing. The mononuclear cell layer was isolated from maternal blood and flow sorted using monoclonal antibodies to CD36 or CD71 and glycophorin A. This was followed by PCR of the blood, mononuclear cells, and the sorted cells with allele- specific primers to RhCc genes. Gel electrophoresis was performed to predict fetal Rhc genotype. The fetal Rhc genotype was confirmed by serologic and DNA testing. Results: All infants were positive for the Rhc gene. The positive fetal Rhc genotype was determined correctly in three of the 11 maternal blood samples without enrichment, in six of the nine mononuclear cell samples, and in seven of the eight sorted cell samples. The fetal genotype from one sorted sample was predicted to be homozygous C. One infant was determined by serology on cord blood to be negative for the c antigen, but repeated infant DNA amplification was consistent with the c genotype. Conclusion: Noninvasive fetal Rhc genotyping can be determined by PCR amplification of the rare fetal cells in maternal blood. These data reaffirm that enrichment of maternal blood for fetal cells is necessary to improve the sensitivity of the test.

L112 ANSWER 5 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1998:28449036 BIOTECHNO
TITLE: Removal of erythroid cells from umbilical cord blood mononuclear cell preparations using magnetic beads and a monoclonal antibody against glycophorin A
AUTHOR: Elliott S.R.; Macardle P.J.; Zola H.
CORPORATE SOURCE: H. Zola, Child Health Research Institute, Women's and Children's Hospital, 72 King William Road, North, Adelaide, SA 5006, Australia.
E-mail: hzola@medicine.adelaide.edu.au
SOURCE: Journal of Immunological Methods, (1998), 217/1-2 (121-130), 28 reference(s)
CODEN: JIMMBG ISSN: 0022-1759
PUBLISHER ITEM IDENT.: S0022175998001112
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands

LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1998:28449036 BIOTECHNO
AB Umbilical cord blood mononuclear cells isolated by density centrifugation are contaminated by erythrocytes and nucleated erythroid precursors which may exceed 50% of the total cell population, and thus interfere with phenotypic, functional and mRNA analyses. Lysis with hypotonic ammonium chloride can overcome this problem, but interferes with lysosomal function and should be avoided when cell preparations are intended for functional studies. The aim of this study was to develop a technique for removing erythroid cells from cord blood mononuclear cell preparations that would be as effective as ammonium chloride lysis but would not affect cellular function. This paper describes a method using 10F7, a mouse monoclonal antibody against human glycophorin A, and magnetic beads coated with anti-mouse immunoglobulin. The population of cord blood mononuclear cells recovered using this technique was of high purity, good yield and viability, and the cells responded appropriately to stimulation in vitro. To maximise cost-effectiveness, purification with magnetic beads could be performed after two density separations to reduce the quantity of beads required.

L112 ANSWER 6 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1998:28120019 BIOTECHNO
TITLE: Five monoclonal antibodies against glycophorin A of human erythrocyte recognize glycoprotein of bovine erythrocyte
AUTHOR: Shan B.; Sugiura T.; Yamashita U.
CORPORATE SOURCE: Dr. U. Yamashita, Department of Immunology, Univ. of Occupational/Envtl. Hlth., School of Medicine, 1-1 Iseigaoka, Yahata-nishiku, Kitakyushu 807, Japan.
SOURCE: Hybridoma, (1998), 17/1 (55-62), 27 reference(s) CODEN: HYBRDY ISSN: 0272-457X
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1998:28120019 BIOTECHNO
AB To study heterophile blood antigens on erythrocytes between human and experimental or domestic animals, we have produced 295 monoclonal antibodies (MAbs) to human erythrocyte membrane protein. According to the affinity, reactivity, and titre of the MAbs, we selected 40 clones to study the heterophile blood antigens between human and bovine, chicken, guinea pig, horse, rabbit, sheep, and swine. Five MAbs commonly reacted with human type A, type B, and type O erythrocytes and reacted with bovine erythrocytes as well but did not react with erythrocytes from other species. Other MAbs did not react with erythrocytes from all the tested animals. These five MAbs reacted with the same erythrocyte membrane protein, 90 KD glycophorin A (GPA) of human or 200 KD major glycoprotein and other two components of bovine by immunoblotting and GPA competitive inhibition assay. Furthermore, by enzyme treatment and monosaccharide competitive inhibition assay, it was confirmed that these five MAbs recognized antigen epitope of glycosylation free amino acid portion but not glycosylation portion of GPA of erythrocyte membrane.

L112 ANSWER 7 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1997:27187377 BIOTECHNO
TITLE: Fine characterization of a series of new monoclonal antibodies directed against glycophorin A
AUTHOR: Rasamoelisolo M.; Czerwinski M.; Bruneau V.; Lisowska E.; Blanchard D.
CORPORATE SOURCE: D. Blanchard, ETS de Loire Atlantique-Vendee, Site de

Nantes, 34 boulevard Jean-Monnet, F-44011 Nantes Cedex 01, France.
SOURCE: Vox Sanguinis, (1997), 72/3 (185-191), 42 reference(s) CODEN: VOSAAD ISSN: 0042-9007
DOCUMENT TYPE: Journal; Article
COUNTRY: Switzerland
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1997:27187377 BIOTECHNO
AB Objectives: Glycophorins A (GPA) and B (GPB) are the major sialoglycoproteins of the human erythrocyte (RBC) membrane. To prepare tools for the analysis of GPA and GPB, we produced a series of new monoclonal antibodies (mAbs) that identified epitopes of GPA. Methods: Seven murine monoclonal antibodies directed to glycophorin A (GPA) were fully characterized by agglutination of untreated and enzyme-treated human erythrocytes, inhibition of agglutination using chemically modified glycophorins and peptides from GPA, immunoblotting, and binding to synthetic peptides on plastic pins. Results: The antibodies identify epitopes located on four different portions of GPA: (1) NaM13-6D2 binds to the N-terminal portion of GPA and GPB carrying the N blood group antigen; (2) NaM26-3F4 recognizes the homologous portion of GPA and GPB corresponding to their amino acids 6-26; (3) NaM10-2H12, NaM16-IB10 and NaM10-6G4 are specific for the amino acid sequence 38-45 of GPA; and (4) NaM37-5F4 and NaM13-4E4 bind to the amino acid residues 119-124 located on the intracellular ponion of GPA. Conclusion: These antibodies represent precise tools to investigate GPA and related molecules in different cells and tissues.

L112 ANSWER 8 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1997:27225760 BIOTECHNO
TITLE: Immunochemical characterisation of monoclonal antibodies directed to glycophorins A and/or B
AUTHOR: Rasamoelisolo M.; Rahuel C.; Loirat M.J.; Willem C.; Cartron J.P.; Blanchard D.
CORPORATE SOURCE: D. Blanchard, Etabl. de Transf. Sanguine, Loire Atlantique/Vendee, 34 Boulevard Jean Monnet, 44011 Nantes Cedex 01, France.
SOURCE: Transfusion Clinique et Biologique, (1997), 4/1 (91-96), 6 reference(s) CODEN: TCBIFL ISSN: 1246-7820
DOCUMENT TYPE: Journal; Conference Article
COUNTRY: France
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1997:27225760 BIOTECHNO
AB Among sixty-nine monoclonal antibodies submitted to the workshop, 28 antibodies directed to glycophorins A and/or B but without blood group specificity were investigated by a series of methods involving agglutination, flow cytometry with CHO transfected cells expressing glycophorin A, ELISA with a carbohydrate-free peptide (residues 1-72) of glycophorin A, and immunoblotting. These MAbs were subdivided in several groups according to their specificity: - N-terminal portion of GPA and GPB; - N-terminal trypsin-sensitive portion of GPA; - extracellular ficin-sensitive portion of GPA; - intracellular domain of GPA; - undetermined. Both flow cytometry with transfectant cells and ELISA with the synthetic peptide prove to be of value in order to determine subspecificities within these groups.

L112 ANSWER 9 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1995:25270603 BIOTECHNO
TITLE: Identification of variant glycophorins of human red cells by lectinoblotting: Application to the Mi.III

variant that is relatively frequent in the Taiwanese population
AUTHOR: Wu A.M.; Duk M.; Lin M.; Broadberry R.E.; Lisowska E.
CORPORATE SOURCE: Glycoimmunochemistry Research Lab., Inst. of Molecular/Cellular Biology, Chang-Gung Coll. of Med./Technology, Kwei-san,Taoyuan 33332, Taiwan.
SOURCE: Transfusion, (1995), 35/7 (571-576)
CODEN: TRANAT ISSN: 0041-1132
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1995:25270603 BIOTECHNO
AB Background: Detection of normal and variant glycophorin electrophoretic bands with T- and Tn-specific lectins is based on the possibility of glycophorin transformation into T or Tn antigens by simple chemical modifications in the blot. Study Design and Methods: Human red cell membrane proteins were fractionated by sodium dodecyl sulfate-polyacrylamide gel electrophoresis and blotted onto nitrocellulose. The blots were submitted to mild acid hydrolysis (desialylation of glycophorins exposing T antigens) and then to Smith degradation (degalactosylation of asialo-glycophorins exposing Tn antigens). The modified glycophorin bands were detected with biotinylated lectins and horseradish peroxidase-conjugated avidin. Results: The lectins from Artocarpus integrifolia (jacalin, anti-T/Tn), Amaranthus hybridus (anti- T), Salvia sclarea (anti-Tn), and Vicia villosa (anti-Tn) were used. The lectins detected normal glycophorin bands in control and variant red cells and characteristic additional bands in Mi.III (GP. Mur) red cells. The sensitivity of the method s comparable to that obtained by immunoblotting with glycophorin monoclonal antibodies. Comparison of the electrophoretic mobility of normal and vat ant bands is helpful in the classification of glycophorin variants. Conclusion: Lectinoblotting, based on carbohydrate recognition, enables the detection in a red cell sample, with high sensitivity of all normal and variant glycophorin bands. The method can be also applied to other purposes, such as the identification of poly-O- glycosylated glycoproteins in other cells or the characterization of glycosylation of glycophorins and other poly-O-glycosylated proteins.

L112 ANSWER 10 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1995:25050138 BIOTECHNO
TITLE: Construction of bacteriophage expressing mouse monoclonal Fab fragments directed against the human MN glycophorin blood group antigens
AUTHOR: Czerwinski M.; Siegel D.L.; Moore J.S.; Spitalnik P.F.; Spitalnik S.L.
CORPORATE SOURCE: Pathology/Laboratory Medicine Dept., 220 John Morgan Building, University of Pennsylvania,Philadelphia, PA 19104, United States.
SOURCE: Transfusion, (1995), 35/2 (137-144)
CODEN: TRANAT ISSN: 0041-1132
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1995:25050138 BIOTECHNO
AB Background: The MN human blood group antigens are complex glycopeptide antigens at the amino terminus of glycophorin A. Many different mouse monoclonal antibodies to these antigens have been produced and characterized. The construction of combinatorial immunoglobulin libraries displaying antibody Fab fragments on the surface of bacteriophage (Fab-phage) represents a novel approach for developing monoclonal reagents, for exploring the diversity of the immune response to specific antigens, and for understanding the molecular

basis of the interaction of an antibody with its antigen. However, it is necessary to determine whether Fab fragments displayed on bacteriophage surfaces retain immunologic characteristics similar to the intact antibodies. Study Design and Methods: Fab-phage were constructed from three anti-N (AH7, N61, and N92) and two anti-M (425/2B and M2A1) murine hybridomas. The Fab-phage and parental hybridomas were compared by enzyme- linked immunosorbent assay, Western blotting, and flow cytometry. Results: In each case, the Fab-phage and its parental hybridoma antibody had similar immunologic characteristics. In particular, their dependence on the pH of the buffer and on sialylation of the target antigen was similar. Conclusion: These results suggest that Fab-phage may provide novel reagents with applications in immunohematology and may be useful in the study of the immune response to human blood group antigens.

L112 ANSWER 11 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1995:25034873 BIOTECHNO
TITLE: Mechanism of regulation of malarial invasion by extraerythrocytic ligands
AUTHOR: Clough B.; Paulitschke M.; Nash G.B.; Bayley P.M.; Anstee D.J.; Wilson R.J.M.; Pasvol G.; Gratzer W.B.
CORPORATE SOURCE: Dept. of Infection/Tropical Medicine, St. Mary's Hospital Medical School, Northwick Park Hospital,Middlesex, HA1 3UJ, United Kingdom.
SOURCE: Molecular and Biochemical Parasitology, (1995), 69/1 (19-27)
CODEN: MBIPDP ISSN: 0166-6851
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1995:25034873 BIOTECHNO
AB Invasion of red cells by Plasmodium falciparum in vitro was inhibited by a range of extracellular ligands, none of which block the major receptors for merozoites. Most effective, in terms of dose response, were two monoclonal antibodies against the Wr.sup.b) antigen on glycophorin A; wheat germ agglutinin which also binds to glycophorin, and an anti-band 3 monoclonal antibody, caused inhibition of invasion at higher levels of saturation, while concanavalin A, which binds to band 3, was without effect. All the ligands except concanavalin A, increased the rigidity of the host cell membrane. The anti-Wr.sup.b antibodies generated the highest dose response effect, but no correlation between invasion and shear elastic modulus of the membrane could be established. All ligands, with the exception of concanavalin A, caused a reduction in the translationally mobile fractions of band 3 and glycophorin, as revealed by fluorescence recovery after photobleaching (FRAP). Invasion diminished with loss of mobile band 3, engendered by bound wheat germ agglutinin or anti-band 3, falling precipitately when the mobile fraction fell below 40% of that in unperturbed membranes. Both anti-Wr.sup.b antibodies suppressed invasion completely at concentrations insufficient to affect significantly either membrane rigidity or intramembrane protein diffusion. A univalent anti-glycophorin A (Fab) fragment, the parent antibody of which was previously shown to inhibit invasion strongly, had only a modest effect on invasion and induced a correspondingly small change in the mobile fraction of band 3. We conjecture that inhibition of migration of intramembrane proteins may oppose invasion by preventing formation of a bare zone in the host cell membrane, but antibodies against the Wr.sup.b determinant prevent invasion by an additional and overriding mechanism, related perhaps to transmission of a structural transmembrane signal, which could uncouple the reciprocal movement of intramembrane proteins and the spectrin network, or to formation of band 3-glycophorin A -antibody clusters.

L112 ANSWER 12 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1994:25022203 BIOTECHNO
TITLE: The rapid detection of the quantity (genotype) and cell lineage (immunophenotype) of contaminating maternal white cells in cord blood samples by fluorescence in situ hybridization combined with confocal laser scanning microscopy
AUTHOR: Wernet P.; Kogler G.; Somville T.
CORPORATE SOURCE: Knochenmarkspenderregister NRW, Spenderzentrale Dusseldorf, Heinrich-Heine Universitat, Moorenstrasse 5,40225 Dusseldorf 1, Germany.
SOURCE: Blood Cells, (1994), 20/2-3 (296-302)
CODEN: BLCEDD ISSN: 0340-4684
DOCUMENT TYPE: Journal; Conference Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1994:25022203 BIOTECHNO
AB The role of maternal blood cell contamination in cord blood as hematopoietic stem cell transplant could be an important factor driving the graft vs. host reactivity. Therefore, the efficacy of fluorescence-labeled chromosome probes for the X and Y chromosomes to study contaminating maternal cells (XX.sup.+, Y.sup.-) in nucleated cells of male cord blood specimen (X.sup.+, Y.sup.+) by fluorescence in situ hybridization (FISH) was evaluated here. Unfortunately, the FISH technique evaluated by standand indirect immunofluorescence was not sufficiently sensitive to safely detect maternal contamination below 2-3%. Thus, the analysis of FISH had to be adapted with confocal laser scanning microscopy, which then gave no false-negative reading values. A Bio-Rad MRC-600 laser microscope with a very high sensitivity for low-intensity and hidden signals was used for the observation of cord blood cells. Sixteen samples from the whole cord blood (CB), 10 analyses of mononuclear cells, 6 of the granulocytic fraction, 6 of picked erythroid burst-forming unit (BFU-E) and granulocyte-macrophage colony-forming unit (CFU-GM) colonies and 5 of enriched CD34.sup.+ cells were performed. Only in 1 of 16 cases was a contamination by maternal cells detected: 10% of all nucleated cells from the whole CB, 5% of the CD3.sup.+ T-cell fraction, 15% of the myelomonocytic cells from mononuclear cells (MNCs), and 15% of picked BFU-E and CFU-GM colonies were of maternal origin. In addition, to determine the hematopoietic lineage of contaminating maternal cells, mononuclear cells, the granulocytic fraction, CD34.sup.+-enriched cells as well as picked BFU-E and CFU-GM colonies were analyzed by the simultaneous immunophenotyping (monoclonal antibodies CD13, CD3, CD14, glycophorin A, CD34) and genotyping (for Y and X) analysis. This approach permits simultaneous visualization of both the immunophenotype (Mabs, APAAP, red fluorescence) and the genotype (chromosomes, fluorescein isothiocyanate, green fluorescence) within the same cell.

L112 ANSWER 13 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1994:24105833 BIOTECHNO
TITLE: Restricted V(H) gene usage by murine hybridomas directed against the human N, but not M, blood group antigen
AUTHOR: Czerwinski M.; Blackall D.P.; Abrams W.R.; Rubocki R.J.; Spitalnik S.L.
CORPORATE SOURCE: Dept. of Pathology/Laboratory Med., University of Pennsylvania,Philadelphia, PA 19104, United States.
SOURCE: Molecular Immunology, (1994), 31/4 (279-288)
CODEN: IMCHAZ ISSN: 0161-5890
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English

SUMMARY LANGUAGE: English
AN 1994:24105833 BIOTECHNO
AB The M and N human blood group antigens are complex glycopeptide determinants at the amino terminus of the red blood cell membrane glycoprotein, glycophorin A. The heavy and light chain variable region cDNA sequences were determined for seven murine monoclonal antibodies recognizing glycophorin A. Three of the antibodies were anti-M and four were anti-N. Each of the anti-M antibodies was composed of V(H) and V(L) regions derived from distinct germline gene families (V(H)I (J558), V(H)4 (X24), V(H)5 (7183), V(K)5, V(K)8, and V(K)19). In contrast, all four anti-N heavy chains were composed of V(H) regions derived from the V(H)2 (Q52) germline gene family and all used the same J4 gene segment. In addition, two of the anti-N light chains were composed of V(K) regions from the V(K)8 germline gene family and used the J1 gene segment. Since each anti-N hybridoma was derived from different mice immunized by different protocols, these results suggest that the murine immune response to the N, but not the M, human blood group antigen is restricted.

L112 ANSWER 14 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1992:22182070 BIOTECHNO
TITLE: Analysis of peptidic epitopes recognized by the three monoclonal antibodies specific for the same region of glycophorin A but showing different properties
AUTHOR: Wasniowska K.; Duk M.; Czerwinski M.; Steuden I.; Dus D.; Radzikowski C.; Bartosz-Bechowski H.; Konopinska D.; Lisowska E.
CORPORATE SOURCE: Department of Immunochemistry, Inst. Immunology/Experiment. Therapy, Polish Academy of Sciences,Wroclaw, Poland.
SOURCE: Molecular Immunology, (1992), 29/6 (783-791)
CODEN: IMCHAZ ISSN: 0161-5890
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1992:22182070 BIOTECHNO
AB Analysis of epitopes for the three monoclonal antibodies (GPA105, GPA33, OSK4-1) against glycophorin A (GPA) was performed with the use of proteolytic fragments of GPA, the synthetic nonapeptide with the sequence of amino acid residues 35-43 of GPA, and a series of peptides synthesized on plastic pins. The antibodies were specific for a short peptide sequence RAHE (a.a. 39-42 of GPA, MAbs GPA105 and OSK4-1) or RAHEV (a.a. 39-43 of GPA, MAb GPA33). Despite recognizing the same fragment of GPA, the three antibodies showed differences in fine specificity and in response to antigen desialylation. Reactions with single replacement analogs of the RAHEV sequence showed that immunodominant (unreplaceable) residues for the MAbs GPA33 and OSK4-1 were His and Glu, respectively, whereas no such residue was found for the MAb GPA105. Desialylation of the antigen gave strong enhancement of reactivity with the MAb GPA33, moderate -with the MAb GPA105, and weak or no enhancement of reaction with the MAb OSK4-1. The results showed that monoclonal antibodies directed against the same fragment of the polypeptide chain of densely glycosylated antigen may recognize different subsites which are masked at different degree by sialic acid residues.

L112 ANSWER 15 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1992:22299763 BIOTECHNO
TITLE: Detection of membrane fragments in hemoglobin solutions
AUTHOR: Biessels P.T.M.; Berbers G.A.M.; Broeders G.C.J.M.; Landsvater R.; Huisman J.; Bleeker W.K.; Bakker J.C.
CORPORATE SOURCE: Central Laboratory of the NRCBTS,Amsterdam,

Netherlands.
SOURCE: Biomaterials, Artificial Cells, and Immobilization Biotechnology, (1992), 20/2-4 (439-442)
CODEN: BACBEU ISSN: 1055-7172
DOCUMENT TYPE: Journal; Conference Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1992:22299763 BIOTECHNO
AB Two methods for the detection of membrane components in human stroma-free hemoglobin (SFHb) solutions are described. The first method is a phospholipid assay with a detection limit of 0.5-1 nmol phospholipid/ml SFHb. For the detection of membrane proteins an immunoassay with a monoclonal antibody against glycophorin α was developed (detection limit 0.01% of the original amount). The determination of both glycophorin α and phospholipid yields useful information on the purity of SFHb solutions, as was shown by determination of the purity of two SFHb solutions prepared in different ways.

L112 ANSWER 16 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1992:22368316 BIOTECHNO
TITLE: Detection of erythrocyte membrane components in hemoglobin-based blood substitutes
AUTHOR: Biessels P.T.; Berbers G.A.; Broeders G.C.; Landsvater R.; Huisman H.G.; Bleeker W.K.; Bakker J.C.
CORPORATE SOURCE: Publication Secretariat, Ctr Lab of the Netherlands Red Cross, Blood Transfusion Service, Plesmanlaan 125,1066 CX Amsterdam, Netherlands.
SOURCE: Clinica Chimica Acta, (1992), 212/3 (113-122)
CODEN: CCATAR ISSN: 0009-8981
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1992:22368316 BIOTECHNO
AB Two methods for the detection of membrane components in human stroma-free hemoglobin solutions are described. The first is a phospholipid assay with a detection limit of 0.5-1 nmol phospholipid/ml hemoglobin-solution. For the detection of membrane proteins an immunoassay with a monoclonal antibody against glycophorin α was developed (detection limit 0.01% of the original amount). These methods were used to determine the purity of Hb solutions prepared in two different ways. Hb solutions prepared by filtration of red blood cells, gradually swollen in hypotonic buffer, contained 0.25% of the original amount of phospholipid and no detectable glycophorin α. For Hb solutions prepared in a similar way from red blood cells lysed in water, the values for phospholipid and glycophorin α were 2.5% and 0.06%, respectively. The determination of both glycophorin α and phospholipid gives a useful indication of the purity of Hb solutions.

L112 ANSWER 17 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1991:21082844 BIOTECHNO
TITLE: Modification of host cell membrane lipid composition by the intra-erythrocytic human malaria parasite Plasmodium falciparum
AUTHOR: Hsiao L.L.; Howard R.J.; Aikawa M.; Taraschi T.F.
CORPORATE SOURCE: Department of Pathology and, Cell Biology, Thomas Jefferson University, 1020 Locust St.,Philadelphia, PA 19107, United States.
SOURCE: Biochemical Journal, (1991), 274/1 (121-132)
CODEN: BIJOAK ISSN: 0264-6021
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom

LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1991:21082844 BIOTECHNO
AB The phospholipid and fatty acid compositions of the host infected erythrocyte plasma membrane (IEPM) have been determined for erythrocytes infected with the human malaria parasite Plasmodium falciparum. IEPM were prepared by selective lysis of the host erythrocyte (but not of the parasite membranes) with 0.1% saponin, followed by differential centrifugation. The purity of the IEPM was determined by measuring the membrane-specific enzyme markers acetylcholinesterase, glutamate dehydrogenase and lactate dehydrogenase, and by immunoelectron microscopy using monoclonal antibodies specific for human erythrocyte glycophorin A (4E7) and for a 195 kDa parasite membrane glycoprotein (Pf6 3B10.1). Both approaches demonstrated that the host erythrocyte plasma membrane preparation was free from contamination by parasite membranes. During intra-erythrocytic development of the parasite, the phospholipid composition of the erythrocyte membrane was strikingly altered. IEPM contained more phosphatidylcholine (38.7% versus 31.7%) and phosphatidylinositol (2.1% versus 0.8%) and less sphingomyelin (14.6% versus 28.0%) than normal uninfected erythrocytes. Similar alterations in phospholipid composition were determined for erythrocyte membranes of parasitized cells isolated by an alternative method utilizing polycationic polyacrylamide microbeads (Affigel 731). The total fatty acid compositions of the major phospholipids in IEPM were determined by g.l.c. The percentage of polyunsaturated fatty acids in normal erythrocyte phospholipids (39.4%) was much higher than in phospholipids from purified parasites (23.3%) or IEPM (24.0%). The unsaturation index of phospholipids in IEPM was considerably lower than in uninfected erythrocytes (107.5 versus 161.0) and was very similar to that in purified parasites (107.5 versus 98.5). Large increases in palmitic acid (C(16:0)) (from 21.88% to 31.21%) and in oleic acid (C(18:1)) (from 14.64% to 24.60%), and major decreases in arachidonic acid (C(20:4)) (from 17.36% to 7.85%) and in docosahexaenoic acid (C(22:6)) (from 4.34% to 1.8%) occurred as a result of infection. The fatty acid profiles of individual phospholipid classes from IEPM resembled in many instances the fatty acid profiles of parasite phospholipids rather than those of uninfected erythrocytes. Analysis of IEPM from P. falciparum-infected erythrocytes (trophozoite stage) revealed that, during intra-erythrocytic maturation of the parasite, the host erythrocyte phospholipid composition was markedly refashioned. These alterations were not dependent on the method used to isolate the IEPM, with similar results obtained using either a saponin-lysis method or binding to Affigel beads. Since mature erythrocytes have negligible lipid synthesis and metabolism, these alterations must occur as a result of parasite-directed metabolism of erythrocyte lipids and/or trafficking of lipids between the parasite and erythrocyte membranes.

L112 ANSWER 18 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1991:21300521 BIOTECHNO
TITLE: A new monoclonal antibody (JC159) that detects glycophorin A for the diagnosis of erythroleukaemia
AUTHOR: Erber W.N.; McLachlan J.; Cordell J.L.; Turley H.; Reid M.; Mason D.Y.
CORPORATE SOURCE: Haematology Department, Royal Perth Hospital,Perth, WA 6000, Australia.
SOURCE: Hematology Reviews and Communications, (1991), 5/2 (113-120)
CODEN: HRCOEG ISSN: 0882-8083
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1991:21300521 BIOTECHNO

L112 ANSWER 19 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1991:21139796 BIOTECHNO
TITLE: Rapid whole blood assay for HIV-1 seropositivity using an Fab-peptide conjugate
AUTHOR: Wilson K.M.; Gerometta M.; Rylatt D.B.; Bundesen P.G.; McPhee D.A.; Hillyard C.J.; Kemp B.E.
CORPORATE SOURCE: St. Vincent's Inst. Med. Res., 41 Victoria Parade,Fitzroy, Vic. 3065, Australia.
SOURCE: Journal of Immunological Methods, (1991), 138/1 (111-119)
CODEN: JIMMBG ISSN: 0022-1759
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1991:21139796 BIOTECHNO
AB A rapid whole blood test has been developed for circulating antibodies to human immunodeficiency virus type 1 (HIV-1), based on agglutination of autologous red blood cells. Evaluation of the test revealed that 100% of seropositive HIV-1 patients (both asymptomatic and AIDS cases) were detected (n = 94) with a specificity of 99.5% in healthy blood donors (n = 596). The assay uses an Fab fragment of a monoclonal antibody specifically directed against glycophorin (a transmembrane glycoprotein present on the surface of human red blood cells). This anti-red blood cell Fab is conjugated via the inter-heavy chain cysteines to a synthetic peptide corresponding to the immunodominant epitope of the HIV-1 viral coat protein gp41 (579-613). Addition of this reagent to 10 μl of whole blood results in the Fab-peptide conjugate coating the red blood cells with peptide. In the presence of circulating antibodies to the HIV-1 peptide, red cell agglutination occurs within 2 min. The sensitivity and specificity of this reagent indicate that it is appropriate for use as a rapid diagnostic test for HIV-1 seropositivity.

L112 ANSWER 20 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1991:21290627 BIOTECHNO
TITLE: A mouse monoclonal antibody against glycophorin A produced by in vitro stimulation with human red cell membranes
AUTHOR: Kolberg J.; Blanchard D.
CORPORATE SOURCE: Department of Immunology, National Inst. Public Health, Geitmyrsveien 75,0462 Oslo 4, Norway.
SOURCE: Immunology Letters, (1991), 30/1 (87-91)
CODEN: IMLED6 ISSN: 0165-2478
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1991:21290627 BIOTECHNO
AB Human erythrocyte membranes were used as antigen for production of mouse monoclonal antibodies against blood group related structures by in vitro immunization. Culture medium supernatant of PHA and PMA stimulated mouse thymus cells was used as source of cytokines. The selected antibody designated 124,D-7 (isotype IgM) was found to directly agglutinate all human red cells, except the rare erythrocytes En(a-) which lack glycophorin A. Immunoblotting showed faint bands in the positions of glycophorin A, whereas no binding occurred to glycophorin B. Inhibition of agglutination with purified glycophorin A and peptides suggests that the epitope is located within the amino acid residues 35-40. Rat and chicken erythrocytes also reacted with the antibody, whereas mouse erythrocytes were only agglutinated at very low dilutions of ascitic fluid.

L112 ANSWER 21 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1990:20097234 BIOTECHNO
TITLE: Flow cytometric analysis of erythrocyte populations in Tn syndrome blood using monoclonal antibodies to glycophorin A and the Tn antigen
AUTHOR: Bigbee W.L.; Langlois R.G.; Stanker L.H.; Vanderlaan M.; Jensen R.H.
CORPORATE SOURCE: Biomedical Sciences Division, Lawrence Livermore Nat. Lab., University of California, P.O. Box 5507, L-452,Livermore, CA 94550, United States.
SOURCE: Cytometry, (1990), 11/2 (261-271)
CODEN: CYTODQ ISSN: 0196-4763
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1990:20097234 BIOTECHNO
AB Flow cytometric analysis employing monoclonal antibodies to the Tn antigen and glycoprotein A was used to characterize the erythrocyte populations present in blood samples from individuals with Tn syndrome. Four monoclonal antibodies specific for the Tn antigen, Gal-NAc monosaccharide, on human erythrocytes were obtained from a fusion of splenocytes from a Biozzi mouse immunized with red cells from a Tn individual. These monoclonal antibodies specifically recognize GalNAc monosaccharide sites located on the erythrocyte cell surface sialoglycoproteins, glycophorin A and glycophorin B, and do not bind to fixed normal red cells presenting the Neu-NAcα2-3Galβ1-3(NeuNAcα2-6)GalNAcα1-O-Ser(Thr) tetrasaccharide or to fixed neuraminidase-digested cells presenting the Gal-GalNAc disaccharide. The percentages of Tn-positive red cells in samples from six unrelated Tn donors ranged from 28 to 99%. Binding of the glycophorin A-specific monoclonal antibodies showed that the erythrocytes composing the Tn-negative fraction presented normal amounts of the M and N epitopes on glycophorin A. The presumed somatic mutational origin of Tn-positive cells was tested in blood samples from five normal donors; three possible Tn cells were observed after analysis of a total of 1.1 x 10.sup.7 erythrocytes, suggesting that the frequency of such cells in normal individuals is < 1 x 10.sup.-.sup.6.

L112 ANSWER 22 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1990:20082840 BIOTECHNO
TITLE: A flow cytometric rosetting assay for the analysis of IgG-Fc receptor interactions
AUTHOR: Tuijnman W.B.; Van de Winkel J.G.J.; Capel P.J.A.
CORPORATE SOURCE: Dept. Experimental Immunology, University Hospital Utrecht, P.O. Box 85500,3508 GA Utrecht, Netherlands.
SOURCE: Journal of Immunological Methods, (1990), 127/2 (207-214)
CODEN: JIMMBG ISSN: 0022-1759
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1990:20082840 BIOTECHNO
AB We have developed a sensitive and flexible method for the qualitative evaluation of IgG-Fc receptor interactions in cell suspensions. The assay is based on the flow cytometric quantitation of antibody-coated erythrocyte (EA) rosetting using fluorescein-labelled indicator erythrocytes (E). The number of IgG molecules on indicator E, an important parameter in EA rosetting, was estimated by calibrated flow

cytometry. EA binding quantitated by this method was correlated with microscopically evaluated rosette formation. Besides automated quantitation of EA binding, this method offers the additional advantage of simultaneously using a second fluorescence parameter, permitting analysis of FcR activity in subpopulations of cells. As an example of the applicability of this approach the binding chracteristics of E sensitized with a series of murine heavy chain isotype switch variant monoclonal antibodies against glycophorin A, to the low affinity receptor on K562 cells were determined. Remarkably, the results suggest a comparable affinity of FcγRII on these cells for immunoglobulins of the murine IgG1, IgG2a and IgG2b isotypes.

L112 ANSWER 23 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1990:20227678 BIOTECHNO
TITLE: Immunoblotting of human red cell membranes: detection of glycophorin B with anti-S and anti-s antibodies
AUTHOR: Khalid G.; Green C.A.
CORPORATE SOURCE: MRC Blood Group Unit, Wolfson House, University College London, 4 Stephenson Way,London NW1 2HE, United Kingdom.
SOURCE: Vox Sanguinis, (1990), 59/1 (48-54)
CODEN: VOSAAD ISSN: 0042-9007
DOCUMENT TYPE: Journal; Article
COUNTRY: Switzerland
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1990:20227678 BIOTECHNO
AB Human anti-S and anti-s eluates bound to glycophorin B on immunoblots from membranes of S+ and s+ red cells, respectively. Eluates of human anti-S were more efficiently prepared from sensitized trypsin-treated cells than from sensitized untreated cells. The results of immunoblotting membranes from enzyme-treated cells confirmed the serological findings: S and s antigens were not affected by treatment with trypsin or sialidase but were destroyed or much depressed by treatment with papain, pronase or α-chymotrypsin. Immunoblotting with anti-S or anti-s of membranes from cells with unusual MNS phenotypes confirms the involvement of glycophorin B in hybrid glycophorins; the existence of such hybrid glycophorins was deduced previously from serological work or immunoblotting with monoclonal antibodies. The presence of s-active glycophorin B in glycophorin (B -A)(Dantu), in glycophorin B(MiIII) and in glycophorin (A-B)(MiV) was confirmed. The bands observed when Mit+ membranes were immunoblotted with anti-S supports the suggestion from serological work that the Mit antigen is associated with an altered S antigen.

L112 ANSWER 24 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1989:19286480 BIOTECHNO
TITLE: Membrane deformability and the capacity for shape change in the erythrocyte
AUTHOR: Chasis J.A.; Schrier S.L.
CORPORATE SOURCE: Department of Medicine, Cancer Research Institute, University of California, Box 0128/M-1282,San Francisco, CA 94143-0128, United States.
SOURCE: Blood, (1989), 74/7 (2562-2568)
CODEN: BLOOAW ISSN: 0006-4971
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1989:19286480 BIOTECHNO

AB Erythrocytes must have the capacity to undergo marked membrane deformation and shape changes in order to circulate through capillaries and respond to a range of shear stresses. To study the interrelationships between membrane deformability and the capacity for shape transformation, we created rigid membranes using several agents and then examined the ability of these erythrocytes with rigid membranes to undergho amphipath-induced shape change. We have previously shown that wheat germ agglutinin (WGA) and a monoclonal antibody to glycophorin A (R-10) cause membrane rigidity as measured by ektacytometry. Experiments were therefore designed to produce comparably rigid membranes using WGA, R-10, and diamide, and then to test the ability of lysophosphatidylcholine to produce echinocytes, and primaquine to produce stomatocytes. We found that diamide treatment substantially blocked both types of shape change. In contrast, R-10 binding did not impair either primaquine- or lysophosphatidylcholine-induced shape change. Further, WGA blocked echinocyte transformation, as previously reported, but not stomatocytosis. Using reduced and unreduced gel electrophoresis and Triton extraction, we compared the biochemical changes associated with WGA-, diamide-, and R-10-induced rigidity, and found them to be different. We conclude that not all rigid cells are incapable of shape change, and therefore that decreased membrane deformability is not predictive of impaired capacity for shape change.

L112 ANSWER 25 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1989:19251569 BIOTECHNO
TITLE: Inhibition of malarial parasite invasion by monoclonal antibodies against glycophorin A correlates with reduction in red cell membrane deformability
AUTHOR: Pasvol G.; Chasis J.A.; Mohandas N.; Anstee D.J.; Tanner M.J.A.; Merry A.H.
CORPORATE SOURCE: Tropical Medicine Unit, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, Oxford, United Kingdom.
SOURCE: Blood, (1989), 74/5 (1836-1843)
CODEN: BLOOAW ISSN: 0006-4971
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1989:19251569 BIOTECHNO
AB The effect of well-characterized monoclonal antibodies to red cell surface molecules on the invasion of human red cells by the malarial parasites Plasmodium falciparum and Plasmodium knowlesi was examined. Antibodies to glycophorin A (GPα) inhibit invasion for both parasite species, and this is highly correlated with the degree to which they decrease red cell membrane deformability as measured by ektacytometry. This effect on rigidity and invasion was also seen with monovalent Fab fragments. The closer the antibody binding site was to the membrane bilayer, the greater was its effect on inducing membrane rigidity and decreasing parasite invasion. Antibodies to the Wright.sup.b determinant in particular were the most inhibitory. This differential effect of the various antibodies was not correlated with their binding affinities or the number of sites bound per cell. Antibodies to surface molecules other than GPα were without effect. A novel mechanism is described whereby monoclonal antibodies and their Fab fragments directed at determinants on the external surface of red cells might act to inhibit invasion by malarial parasites by altering membrane material properties.

L112 ANSWER 26 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1989:19258728 BIOTECHNO
TITLE: Two different anti-erythroid monoclonal antibodies in immunodiagnosis of human leukemias: A comparative

study
AUTHOR: Tupitsyn N.N.; Mechetner E.B.; Baryschnikov A.J.; Drozdova T.S.; Frenkel M.A.; Ievleva E.S.; Kiselev A.V.; Perilov A.A.; Peterson I.S.; Probatova N.A.; Protasova A.K.; Rozinova E.N.; Tonevitsky A.G.; Volkova M.A.
CORPORATE SOURCE: Cancer Research Center, Moscow 115478, Russia.
SOURCE: International Journal of Cancer, (1989), 44/4 (589-592)
CODEN: IJCNAW ISSN: 0020-7136
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1989:19258728 BIOTECHNO
AB To date, only anti-glycophorin-A monoclonal antibodies (MAbs) have been widely used as anti-erythroid probes in the diagnosis of leukemias. We have examined blood, bone-marrow and lymph-node samples from 474 patients, adults and children, with different hemopoietic malignancies, using a panel of MAbs including 2 anti-erythroid MAbs directed to glycophorin-A and an antigen of erythroblasts, Ag-Eb. MAb HAE9 directed against a human epitope of Ag-Eb has earlier been shown to be highly specific for immature erythroid cells. Of all the patients, 2.7% demonstrated glycophorin-A expression on blast cells, while anti-Ag-Eb MAb HAE9 reacted positively with cells from 6.0% of patients. Samples from 31 of 474 (6.5%) patients expressed one or both erythroid markers. Our results indicate that MAb HAE9 may be useful, in combination with anti-glycophorin-A MAbs, as an anti-erythroid probe for immunophenotyping human leukemias.

L112 ANSWER 27 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1988:18077664 BIOTECHNO
TITLE: Monoclonal antibodies against glycophorin A
AUTHOR: Wasniowska K.; Schroer K.R.; McGinniss M.; Reichert C.; Zopf D.
CORPORATE SOURCE: Laboratory of Pathology, National Cancer Institute, Bethesda, MD 20892, United States.
SOURCE: Hybridoma, (1988), 7/1 (49-54)
CODEN: HYBRDY ISSN: 0272-457X
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1988:18077664 BIOTECHNO
AB Two mouse IgM monoclonal antibodies, 177.1 and 179.3, are directed against glycophorin A, the major sialoglycoprotein of human erythrocytes. Both antibodies agglutinate blood group M and N erythrocytes equally well, both before and after treatment with neuraminidase or trypsin, but fail to agglutinate erythrocytes treated with papain. Antibody 179.3 agglutinates Mi(VII)(K.T.) cells, whose glycophorin A probably contains some alterations in amino acid sequence between residues 46-56, but antibody 177.1 does not agglutinate these cells. Neither antibody agglutinates En(a-)G.W. cells, which lack glycophorin A completely. The hemagglutinating activity of antibody 177.1 is inhibited by purified glycophorin A and its chymotryptic glycopeptides CH1 (amino acid residues 1-64) and CH3 (amino acid residues 35-64), whereas the hemagglutinating activity of 179.3 is inhibited weakly by glycophorin A but not by chymotryptic peptides. These antibodies both are classified as anti-En(a-)FS but apparently bind different epitopes.

L112 ANSWER 28 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1987:17097905 BIOTECHNO
TITLE: A new photometric method for the quantitation of Fc receptors for murine IgG1 on human monocytes and cell lines
AUTHOR: Van de Winkel J.G.J.; Tax W.J.M.; Van Bruggen M.C.J.; et al.
CORPORATE SOURCE: Department of Medicine, Division of Nephrology, St. Radboud Hospital, University of Nijmegen, 6525 GA Nijmegen, Netherlands.
SOURCE: Journal of Immunological Methods, (1987), 101/1 (109-118)
CODEN: JIMMBG
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
AN 1987:17097905 BIOTECHNO
AB We have previously shown a polymorphism of human Fc receptors for mouse IgG1 using an EA rosette technique in which human erythrocytes sensitized with a murine IgG1 monoclonal antibody against glycophorin A acted as indicator cells. We now describe a method to quantitate this EA rosetting using the pseudoperoxidase activity present in erythrocytes. This photometric assay allows the sensitive quantitative determination of Fc receptor expression on human monocytes and cell lines. Not only the human Fc receptor for murine IgG1 can be studied in this way, but the method can also be applied to other Fc receptors. An important factor in this type of rosette assay appears to be the amount of negative charge present on the surface of the indicator erythrocytes. Using alcian blue as a probe, we found that this negative charge is higher on human erythrocytes than on sheep erythrocytes, which may contribute to a better signal-to-noise ratio. The method described facilitates the characterization of Fc receptors and permits the rapid screening of monoclonal anti-Fc receptor antibodies.

L112 ANSWER 29 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1985:15073543 BIOTECHNO
TITLE: Flow cytometric characterization of normal and variant cells with monoclonal antibodies specific for glycophorin A
AUTHOR: Langlois R.G.; Bigbee W.L.; Jensen R.H.
CORPORATE SOURCE: Biomedical Sciences Division, Lawrence Livermore National Laboratory, University of California, Livermore, CA 94550, United States.
SOURCE: Journal of Immunology, (1985), 134/6 (4009-4017)
CODEN: JOIMA3
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AN 1985:15073543 BIOTECHNO
AB Quantitative immunofluorescence measurements were performed on erythrocytes labeled with monoclonal antibodies to glycophorin A (GPA) to assess the level of binding of these antibodies to normal and variant cell types. The seven antibodies used in this study include two that bind preferentially to the M form of GPA, three that bind preferentially to the N form, and two that bind equally well to both. Flow cytometric analysis of mixtures of cells differing in M,N type showed binding specificities of greater than 100-fold for most of the antibodies, and showed that three antibodies bind cell-bound GPA with an affinity of approximately 10.sup.9 M.sup.-.sup.1. These data also showed that the level of expression of GPA varies by less than 10% from cell to cell and from individual to individual. Flow measurements were also done on human erythrocytes with the following variant forms of glycophorin: M(c), M(g), M(k), En(F), En(UK), Mi-I, Mi-II, Mi-III, S-s-U-, Tn.sup.+, and St(a.sup.+). Other

cell types analyzed included erythrocytes from chimpanzee, rhesus, African green, and capuchin monkeys, and cells from the human erythroleukemia cell line, K562. Flow analysis with our seven antibodies showed these cell types have distinctive labeling patterns consistent with the known or inferred altered glycophorins presented on these cells. In most cases, variant alleles were expressed at normal levels. Our results support other observations that the variants En(UK) and St(a.sup.+) contain hybrid GPA-GPB proteins, and suggest that their level of expression is largely determined by the 3' end of the hybrid genes.

L112 ANSWER 30 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1985:15143494 BIOTECHNO
TITLE: Presence of the Tn antigen on hematopoietic progenitors from patients with the Tn syndrome
AUTHOR: Vainchenker W.; Vinci G.; Testa U.; et al.
CORPORATE SOURCE: INSERM U.91, Hopital Henri Mondor, 94010 Creteil, France.
SOURCE: Journal of Clinical Investigation, (1985), 75/2 (541-546)
CODEN: JCINAO
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AN 1985:15143494 BIOTECHNO
AB The Tn syndrome is an acquired clonal disorder characterized by the exposure of a normally hidden determinant, the Tn antigen, on the surface of human erythrocytes, platelets, granulocytes, and lymphocytes. Two distinct populations, Tn positive (Tn.sup.+) and Tn negative (Tn.sup.-), of mature hemopoietic cells are present in Tn patients. To determine whether the Tn antigen is already expressed on erythroid, myeloid, and pluripotent progenitors, light-density mononuclear blood cells from two patients with this syndrome were separated by fluorescent-activated cell sorting and by affinity chromatography into Tn.sup.+ and Tn.sup.- fractions, using their binding properties to Helix pomatia agglutinin (HPA). Burst-forming-unit erythroid (BFU-E), colony-forming-unit granulocyte/macrophage (CFU-GM), and mixed colony-forming-unit (CFU-GEMM) cells were assayed in plasma clot cultures. After 12-14 d of culture, colonies were studied by a double fluorescent labeling procedure. First a fluorescein-conjugated HPA permitted evaluation of the presence or absence of the Tn antigen at the surface of the cells composing each colony, and second, the binding of a murine monoclonal antibody against either glycophorin A (LICR-LON-R10) or against a myeloid antigen (80H5), revealed by an indirect fluorescent procedure, was used to establish the erythroid or myeloid origin of each cell. The Tn.sup.+ fraction obtained by cell sorting gave rise to nearly 100% Tn.sup.+ colonies composed exclusively of cells bearing this antigen. The reverse was observed for the Tn.sup.- cell fraction. These results demonstrate that in the Tn syndrome, BFU-E, CFU-GM, and CFU-GEMM of the Tn.sup.+ clone express the Tn antigen at this early stage of differentiation.

L112 ANSWER 31 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1985:15071611 BIOTECHNO
TITLE: Monoclonal antibodies to cyanogen bromide fragments of glycophorin A
AUTHOR: Barsoum A.L.; Bhavanandan V.P.; Davidson E.A.
CORPORATE SOURCE: Department of Biological Chemistry, Milton S. Hershey Medical Center, Pennsylvania State University, Hershey, PA 17033, United States.
SOURCE: Molecular Immunology, (1985), 22/4 (361-367)
CODEN: IMCHAZ
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English

AN 1985:15071611 BIOTECHNO
AB Eleven mouse monoclonal antibodies directed against epitopes on CNBr peptides of the major sialoglycoconjugate of the human red blood cell, glycophorin A, have been produced by hybridomas derived from P3-X63-Ag8.653 myeloma cells and spleen cells from BALB/c mice immunized with purified glycophorin. The monoclonal antibodies could be divided into four groups according to their reactivities with CNBr peptides in a direct ELISA assay: (1) one antibody (6B5) that binds solely to the aminoterminal octapeptide (CNBr3); (2) two antibodies (8F10 and 9C3) that bind to CNBr1 (residues 9-81); (3) two antibodies (3D2 and 4C6) that are reactive with CNBr2, The C-terminal portion of the molecule (residues 82-131); (4) six antibodies (1B4, 4C3, 4E7, 7B10, 7C11 and 9D6) which are cross-reactive with an epitope on both CNBr1 and CNBR3 glycopeptides. This cross-reactive epitope(s) appears to involve both carbohydrate and protein residues.

L112 ANSWER 32 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1984:15220998 BIOTECHNO
TITLE: Differentiation of human erythroid cells is associated with increased O-glycosylation of the major sialoglycoprotein, glycophorin A
AUTHOR: Gahmberg C.G.; Ekblom M.; Andersson L.C.
CORPORATE SOURCE: Department of Biochemistry, University of Helsinki, 00170 Helsinki 17, Finland.
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1984), 81/21 I (6752-6756) CODEN: PNASA6
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AN 1984:15220998 BIOTECHNO
AB Glycophorin A, the major human erythrocyte sialoglycoprotein, is found exclusively on cells of the erythroid lineage. The amino acid sequence is known, and glycophorin A isolated from mature erythrocytes contains a single N-glycosidic and 15 O-glycosidic oligosaccharides. Monoclonal antibodies against erythrocyte glycophorin A reacted weakly with erythroid precursors while a monospecific rabbit antiserum reacted strongly with immature and mature red cells. Glycophorin A was isolated from cells representing various stages of erythropoiesis in normal bone marrow, from blood cells of neonates with erythroblastosis fetalis, and from the erythroleukemic cell lines K562 and HEL before and after induced differentiation. Analysis of the oligosaccharides showed less O-glycosylation of glycophorin A in erythroid precursors. The degree of glycosylation increased concomitantly with differentiation.

L112 ANSWER 33 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1984:15218263 BIOTECHNO
TITLE: Binding specificities of eight monoclonal antibodies to human glycophorin A - Studies with M(c)M, and M(k)En(UK) variant human erythrocytes and M- and MN(v)-type chimpanzee erythrocytes
AUTHOR: Bigbee W.L.; Langlois R.G.; Vanderlaan M.; Jensen R.H.
CORPORATE SOURCE: Biomedical Sciences Division, Lawrence Livermore National Laboratory, University of California, Livermore, CA 94550, United States.
SOURCE: Journal of Immunology, (1984), 133/6 (3149-3155) CODEN: JOIMA3
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AN 1984:15218263 BIOTECHNO

AB Four newly derived mouse monoclonal antibodies to human glycophorin A are described. Three of these antibodies bind preferentially to the N form of glycophorin A; the fourth recognizes a shared determinant of the M and N forms. All four antibodies are directed toward the 39 amino acid, amino-termial portion of the protein, and the N-specific antibodies require for binding the presence of N-acetylneuraminic acid on the glycosidically linked oligosaccharides. Cross-reaction of the N-specific antibodies to homozygous MM erythrocytes appears to result from binding to glycophorin B. In addition, these antibodies together with four previously reported glycophorin monoclonal antibodies, including two that specifically recognize the M form of glycophorin A, were tested for binding to M(c)M and M(k)En(UK) variant human erythrocytes and M- and MN(v)-type chimpanzee erythrocytes. Results obtained for five of the six M- and N-specific monoclonal antibodies point to the general immunodominance of the amino-terminal serine-leucine polymorphism and the requirement for sialic acid. One of the two M-specific monoclonal antibodies, 9A3, discriminates between the M, N, and M(c) forms of glycophorin A solely on the basis of the amino-terminal serine-leucine polymorphism. The other M-specific antibody, 6A7, requires a more complex determinant involving the glycine-glutamic acid polymorphism at the fifth position in the sequence as well. The epitopes for all three N-specific monoclonal antibodies include the amino terminal leucine that occurs in the N form of glycophorin A and may also include the glutamic acid that occurs at position five. Our studies support the proposed Lepore-type glycophorin A -B hybrid gene rearrangement for the En(UK) allele found in the English En(a-) family. The date also confirm the expression of the M-like glycoprotein on chimpanzee erythrocytes and the presence of a human glycophorin B-like antigen on the MN(v)-type cells.

L112 ANSWER 34 OF 34 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1983:13077801 BIOTECHNO
TITLE: Diverse specificities of the five monoclonal antibodies reactive with glycophorin A of human erythrocytes
AUTHOR: Ochiai Y.; Furthmayr H.; Marcus D.M.
CORPORATE SOURCE: Dep. Med., Baylor Coll. Med., Houston, TX 77030, United States.
SOURCE: Journal of Immunology, (1983), 131/2 (864-868) CODEN: JOIMA3
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AN 1983:13077801 BIOTECHNO
AB Glycophorin A (GPA), the major sialoglycoprotein of human red cells, bears blood group MN determinants, and is a useful marker of the erythroid lineage in differentiating cells. Five monoclonal antibodies that react with GPA and possess a spectrum of serologic properties and fine specificities were obtained by immunization of mice with umbilical cord erythrocytes. Three antibodies, B22A, D22 and E11B, did not agglutinate En(a-) erythrocytes, genetic variants that lack GPA, and F11 and J11A agglutinated these cells very weakly. Antibodies B22A, E11B, and F11 agglutinated protease-treated cells more strongly than untreated erythrocytes, and they appeared to react with a peptide determinant located on the C-terminal side of the site at which trypsin cleaves GPA in the intact erythrocyte. In contrast to B22A and E11B, the hemagglutinating activity of F11 was not inhibited by purified GPA, nor did it bind to GPA in a solid phase immunoassay, but it immunoprecipitated GPA. Antibodies D22 and J11A appeared to be directed against carbohydrate determinants, or conformational determinants created by hydrogen bonding or electrostatic interactions between carbohydrate and protein. A preferential reaction of antibody J11A with MM over NN GPA

was demonstrated by its reactions with enzyme-treated erythrocytes, its inhibition by purified GPA or its tryptic fragments, and by an ELISA assay.

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Fine Characterization of a Series of New Monoclonal Antibodies Directed against Glycophorin A

Authors: Rasamoelisolo M.[1]; Czerwinski M.[2]; Bruneau V.[3]; Lisowska E.[2]; Blanchard D.[1]

Source: Vox Sanguinis, Volume 72, Number 3, April 1997, pp. 185-191(7)

Publisher: Blackwell Publishing

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Abstract:

Objectives: Glycophorins A (GPA) and B (GPB) are the major sialoglycoproteins of the human erythrocyte (RBC) membrane. To prepare tools for the analysis of GPA and GPB, we produced a series of new monoclonal antibodies (mAbs) that identified epitopes of GPA. **Methods:** Seven murine monoclonal antibodies directed to glycophorin A (GPA) were fully characterized by agglutination of untreated and enzyme-treated human erythrocytes, inhibition of agglutination using chemically modified glycophorins and peptides from GPA, immunoblotting, and binding to synthetic peptides on plastic pins. **Results:** The antibodies identify epitopes located on four different portions of GPA: (1) NaM13-6D2 binds to the N-terminal portion of GPA and GPB carrying the N blood group antigen; (2) NaM26-3F4 recognizes the homologous portion of GPA and GPB corresponding to their amino acids 6-26; (3) NaM10-2H12, NaM16-IB10 and NaM10-6G4 are specific for the amino acid sequence 38-45 of GPA; and (4) NaM37-5F4 and NaM13-4E4 bind to the amino acid residues 119-124 located on the intracellular ponion of GPA. **Conclusion:** These antibodies represent precise tools to investigate GPA and related molecules in different cells and tissues.

Document Type: Research article

DOI: 10.1046/j.1423-0410.1997.7230185.x

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